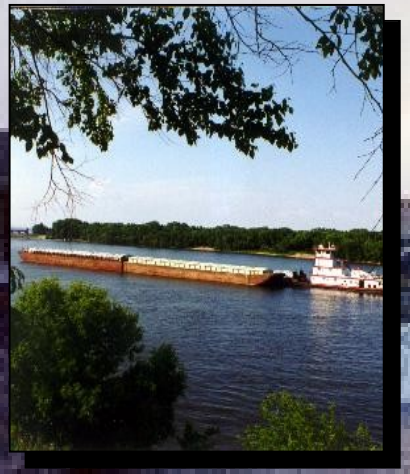
Gary Loss, P.E.
Deputy for Programs, Planning & Project Management, Rock Island District
July 11, 2006

US Army Corps of Engineers®

USACE Rock Island District

PRIMARY CIVIL WORKS MISSION AREAS



Navigation

Flood Damage Reduction

Environmental Restoration

Emergency Operations

...solving problems along the Upper Mississippi River since 1866

One Corps Serving the Armed Forces and the Nation

US Army Corps of Engineers®

Rock Island District

- Primarily a civil works district
- 78,000 square miles
- Portions of 5 states
- Operate 582 miles of 9-foot navigation channel
- 20 locks & dams
- 2nd longest navigation channel of any Corps district
- 2nd largest number of locks of any Corps district
- 3 reservoirs

US Army Corps of Engineers®

Flood Damage Reduction

- Built nearly 100 flood damage reduction projects
- 546 combined miles of levees & concrete floodwalls
- Mississippi & Illinois rivers & their tributaries

US Army Corps of Engineers®

- Continuing Authorities Program
- Flood damage reduction
- Streambank erosion protection
- Environmental restoration

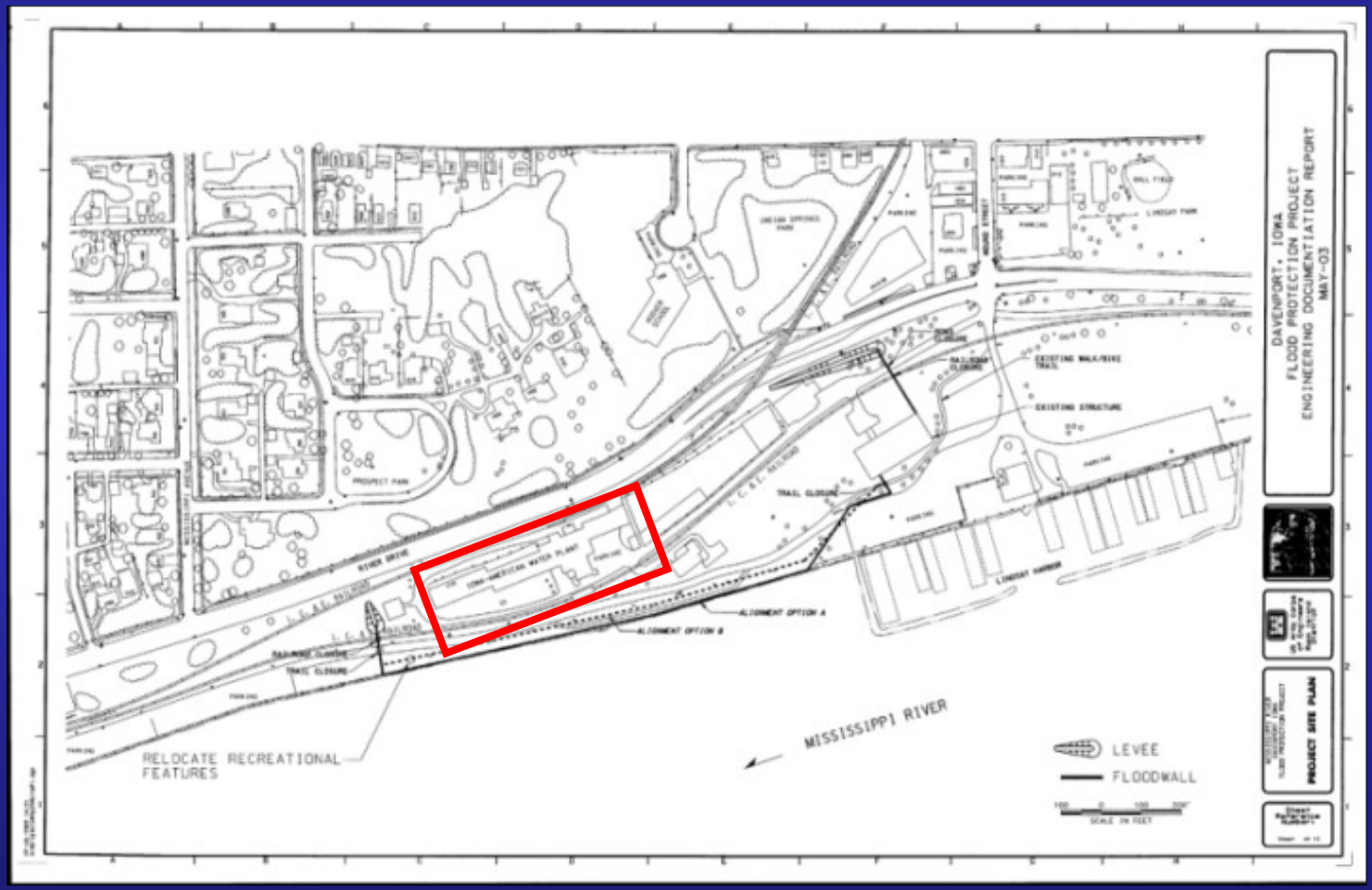
- Red Rock Dam, Iowa

- Coralville Dam, Iowa

- Saylorville Reservoir, Iowa

US Army Corps of Engineers®

Davenport Water Treatment Facility Flood Damage Reduction Project



US Army Corps of Engineers®

Other Flood Damage Reduction Projects in the Quad-City Area

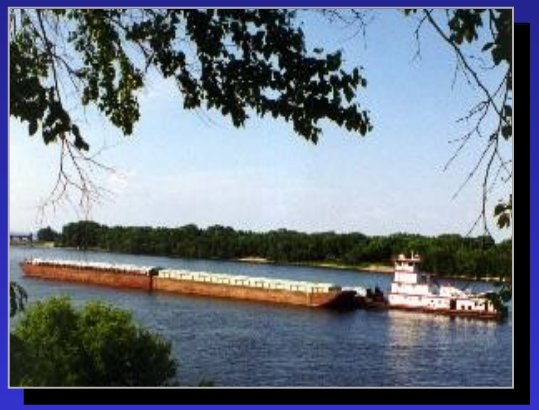
- Bettendorf Levee/Folding Wall
- Rock Island
- Milan/Big Island
- East Moline
- Provide assistance to other communities

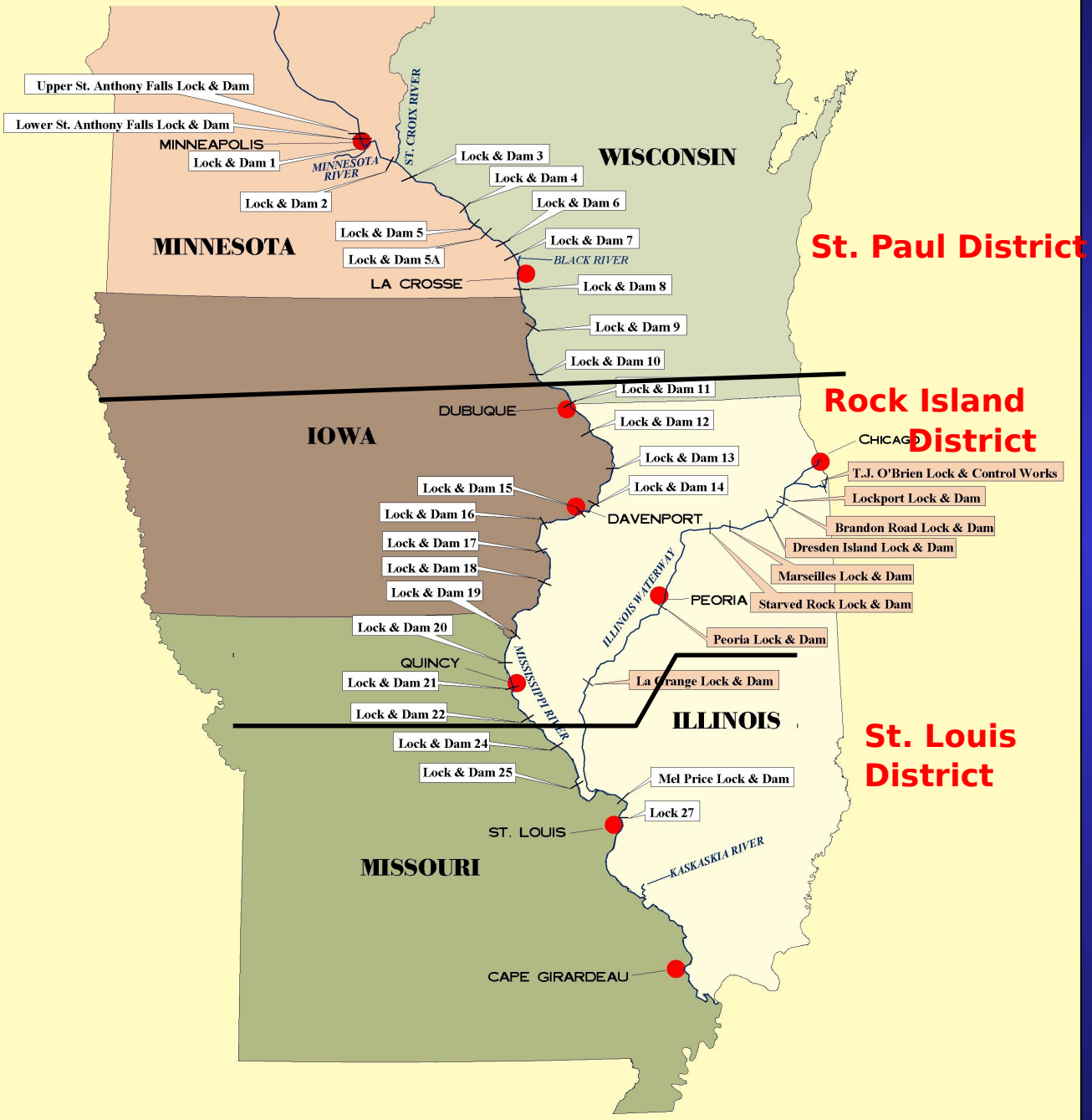
during times of high water

US Army Corps of Engineers®

Upper Mississippi River & Illinois Waterway

- 3 Districts
  - St. Paul
  - Rock Island
  - St. Louis
- 37 navigation lock sites
- 1,200 miles of navigable channel

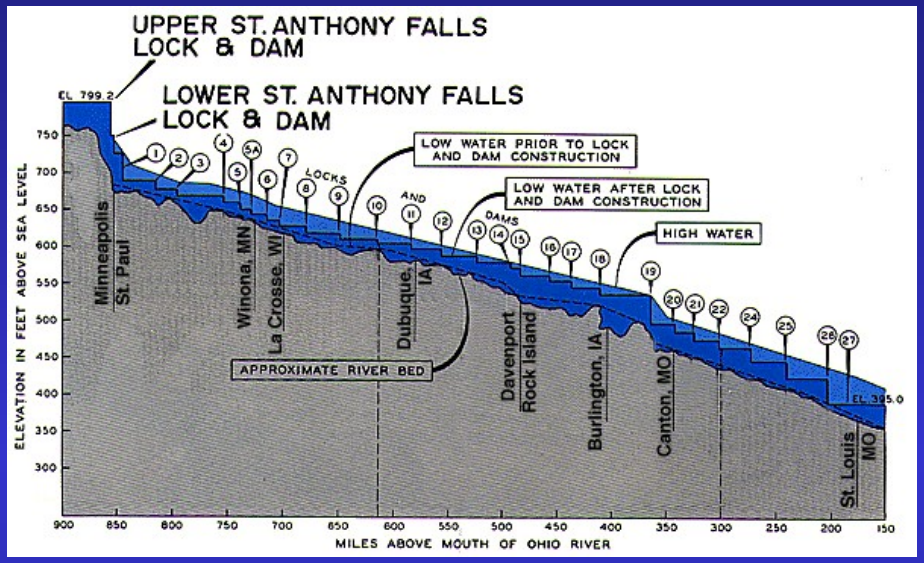


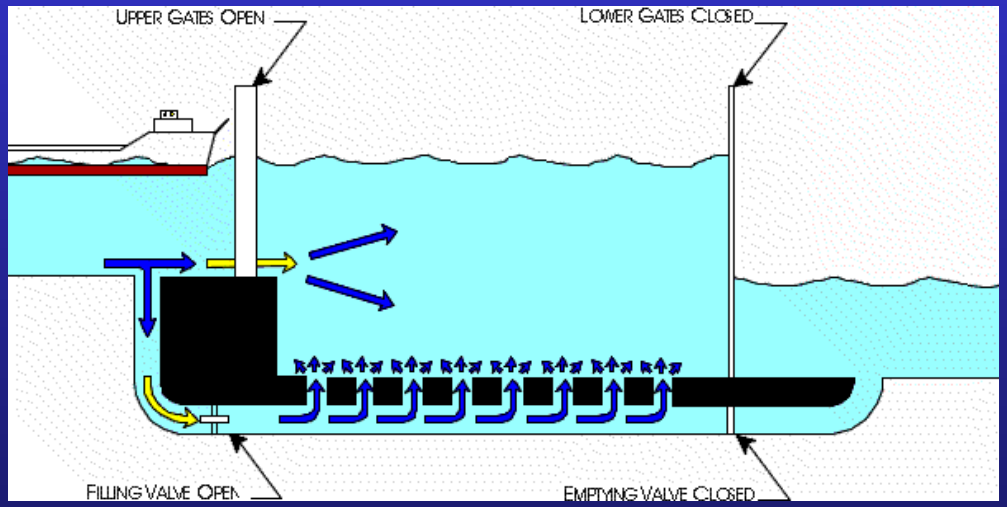

Upper St. Anthony Falls Lock & Dam
Lower St. Anthony Falls Lock & Dam
MINNEAPOLIS
Lock & Dam 1
MINNESOTA RIVER
Lock & Dam 2
ST. CROIX RIVER
Lock & Dam 3
Lock & Dam 4
Lock & Dam 6
Lock & Dam 5
Lock & Dam 5A
Lock & Dam 7
BLACK RIVER
LA CROSSE
Lock & Dam 8
Lock & Dam 9
Lock & Dam 10
Lock & Dam 11
DUBUQUE
Lock & Dam 12
Lock & Dam 13
Lock & Dam 14
Lock & Dam 15
Lock & Dam 16
DAVENPORT
Lock & Dam 17
Lock & Dam 18
Lock & Dam 19
Lock & Dam 20
QUINCY
Lock & Dam 21
Lock & Dam 22
Lock & Dam 24
Lock & Dam 25
ST. LOUIS
MINNESOTA
IOWA
WISCONSIN
ILLINOIS
MISSOURI
MISSISSIPPI RIVER
ILLINOIS WATERWAY
CHICAGO
T.J. O'Brien Lock & Control Works
Lockport Lock & Dam
Brandon Road Lock & Dam
Dresden Island Lock & Dam
Marseilles Lock & Dam
Starved Rock Lock & Dam
PEORIA
Peoria Lock & Dam
La Grange Lock & Dam
Mel Price Lock & Dam
Lock 27
KASKASKIA RIVER
CAPE GIRARDEAU
St. Paul District
Rock Island District
St. Louis District

US Army Corps of Engineers®

Upper Mississippi River & Illinois Waterway

- Region's more than 30 million residents rely on river water for public & industrial supplies, power plant cooling, wastewater assimilation & other uses.
- 29 locks & dams on the Mississippi & eight on the Illinois replaced rapids & falls with a stairway of water for commercial & recreational traffic.

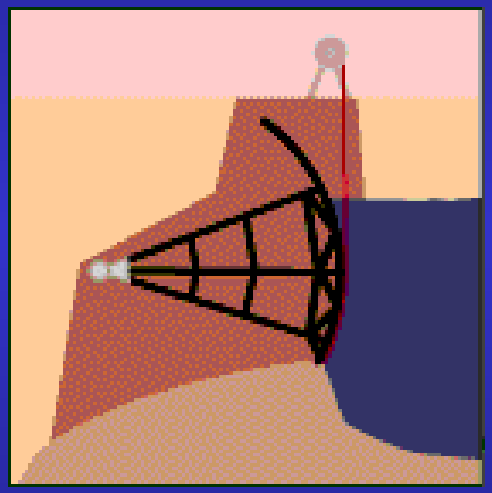




US Army Corps of Engineers®

Tainter Gates

- Supported on two rockers
- Convex on the upstream side
- The rush of water helps open & close the gates



US Army Corps of Engineers®

Roller Gates

Compare...

Iowa Department of Transportation

Source: Iowa Department of Transportation - 800 Lincoln Way - Ames, IA 50010 - 515-239-1312

Cargo Capacity

ONE BARGE	ONE 15 BARGE TOW	JUMBO HOPPER CAR	100 CAR TRAIN UNIT	LARGE SEMI
1,500 TON	22,500 TON	100 TON	10,000 TON	26 TON
52,500 BUSHELS	787,500 BUSHELS	3,500 BUSHELS	350,000 BUSHELS	910 BUSHELS
453,600 GALLONS	6,804,000 GALLONS	30,240 GALLONS	3,024,000 GALLONS	7,865 GALLONS

Equivalent Units

ONE BARGE

15 JUMBO HOPPER CARS

58 LARGE SEMIS

ONE 15 BARGE TOW

2.25 100 CAR UNIT TRAINS

870 LARGE SEMIS

Equivalent Lengths

ONE 15 BARGE TOW

.25 MILES

2.25 100 CAR TRAIN UNITS

2.75 MILES

870 LARGE SEMIS

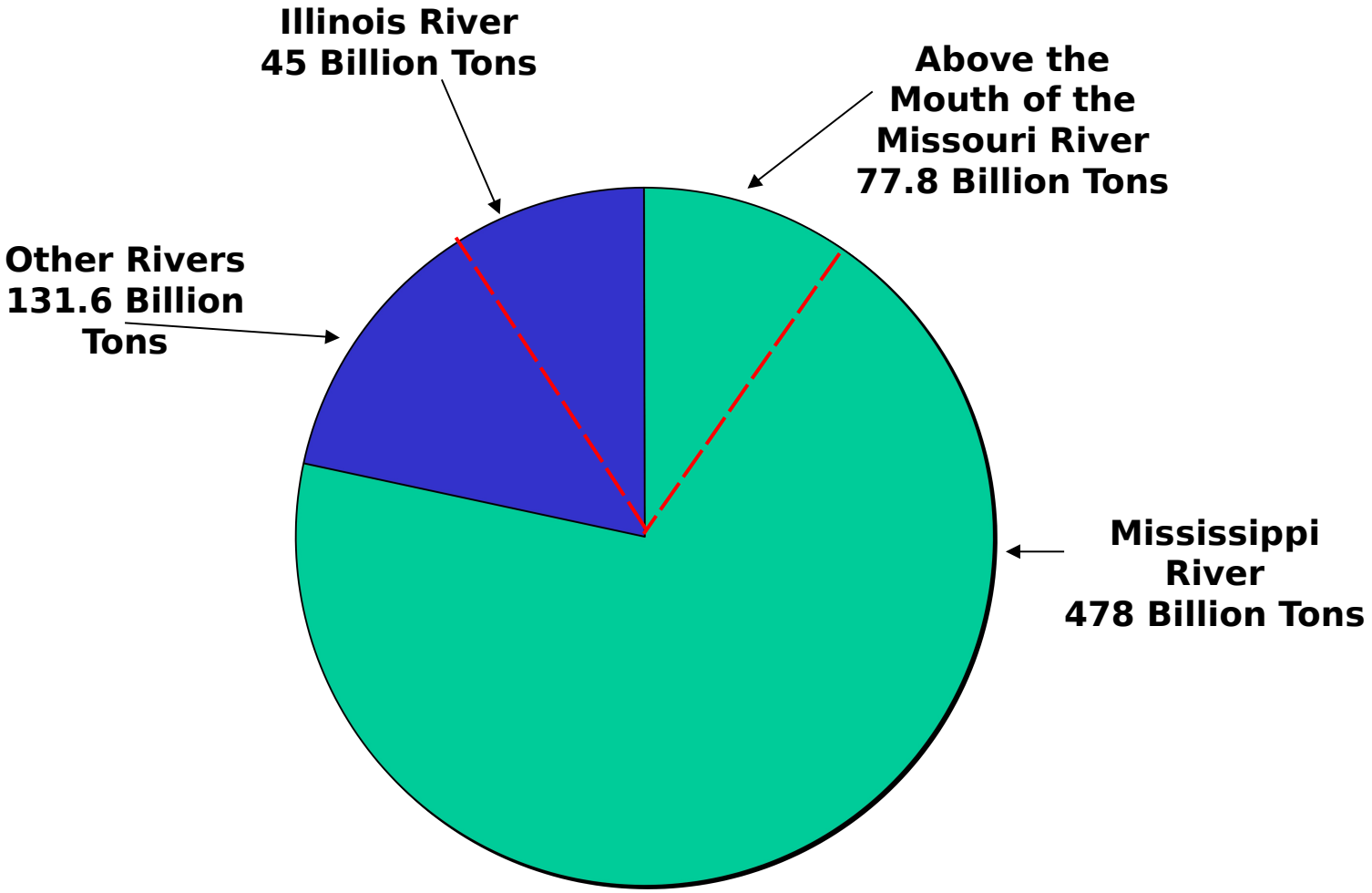
11.5 MILES
(BUMPER TO BUMPER)

TR 444 12-21-94

US Army Corps of Engineers®

Upper Mississippi River & Illinois Waterway

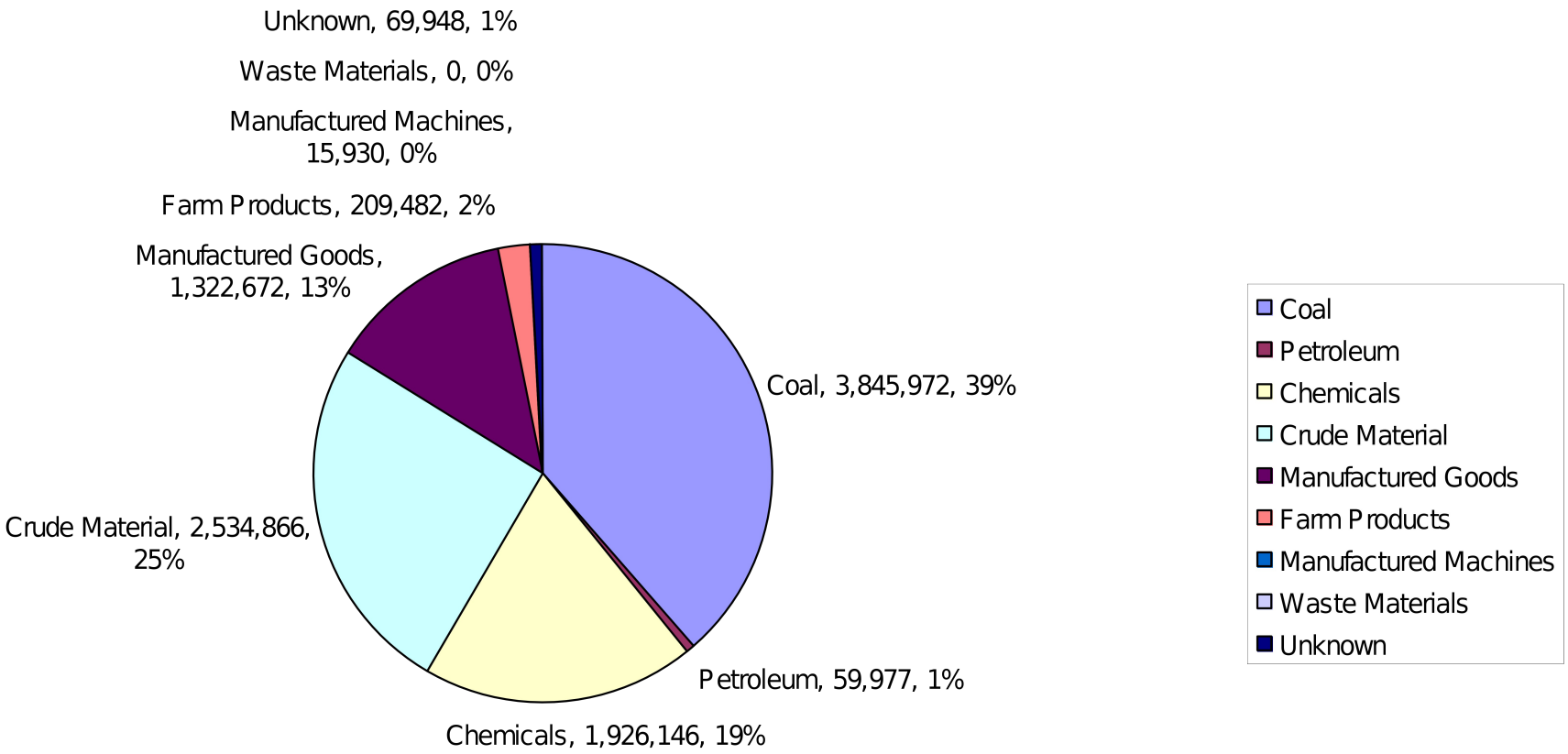
- Farm products make up more than half the total number of tons shipped on the river system.
- Also sand & gravel, coal & petrochemicals.
- 70% of the corn exported comes out of our area by barge.
- Nearly $725 million dollars in annual benefits to the public are received due to the reduced costs associated with river transportation over other forms of transportation, such as rail & truck.



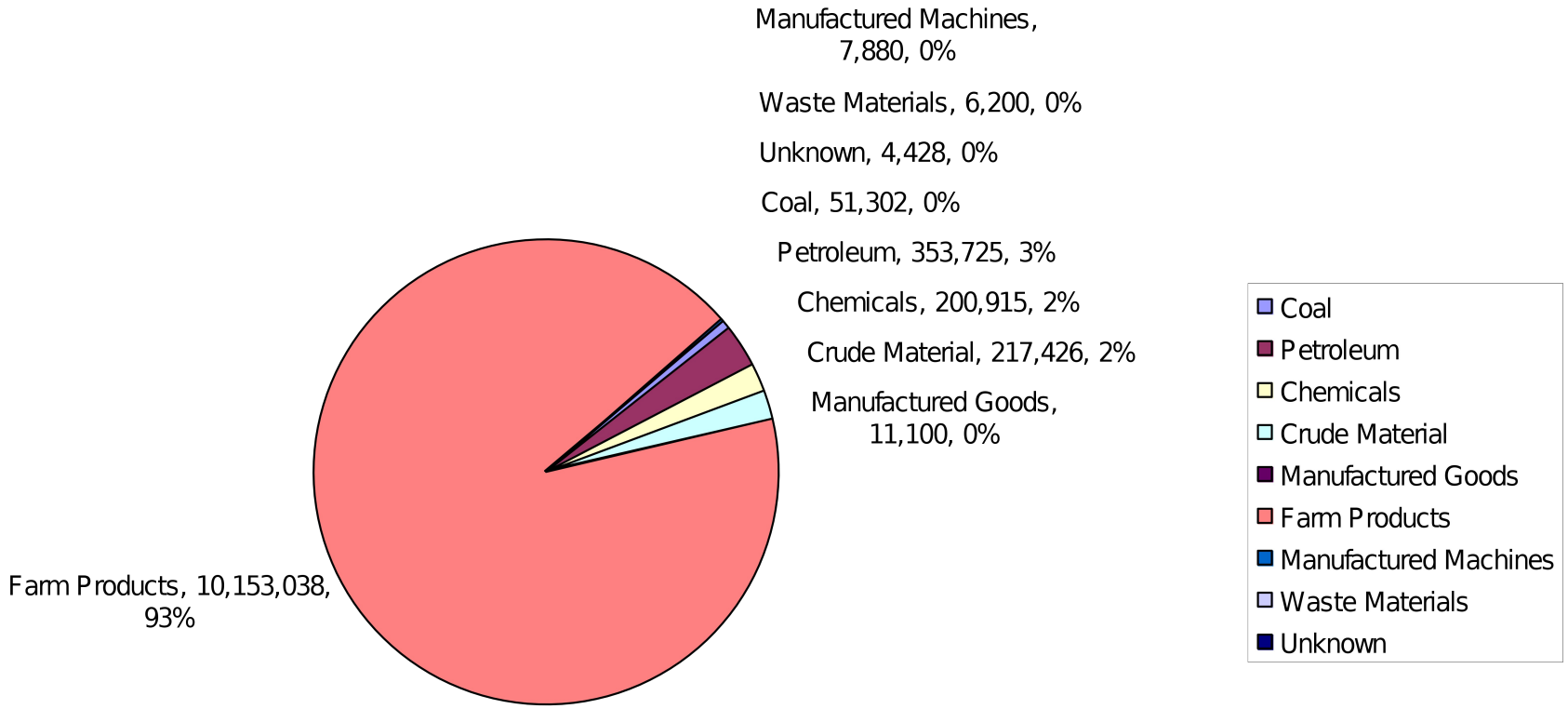
609.6 Billion Tons

Inland Navigation System

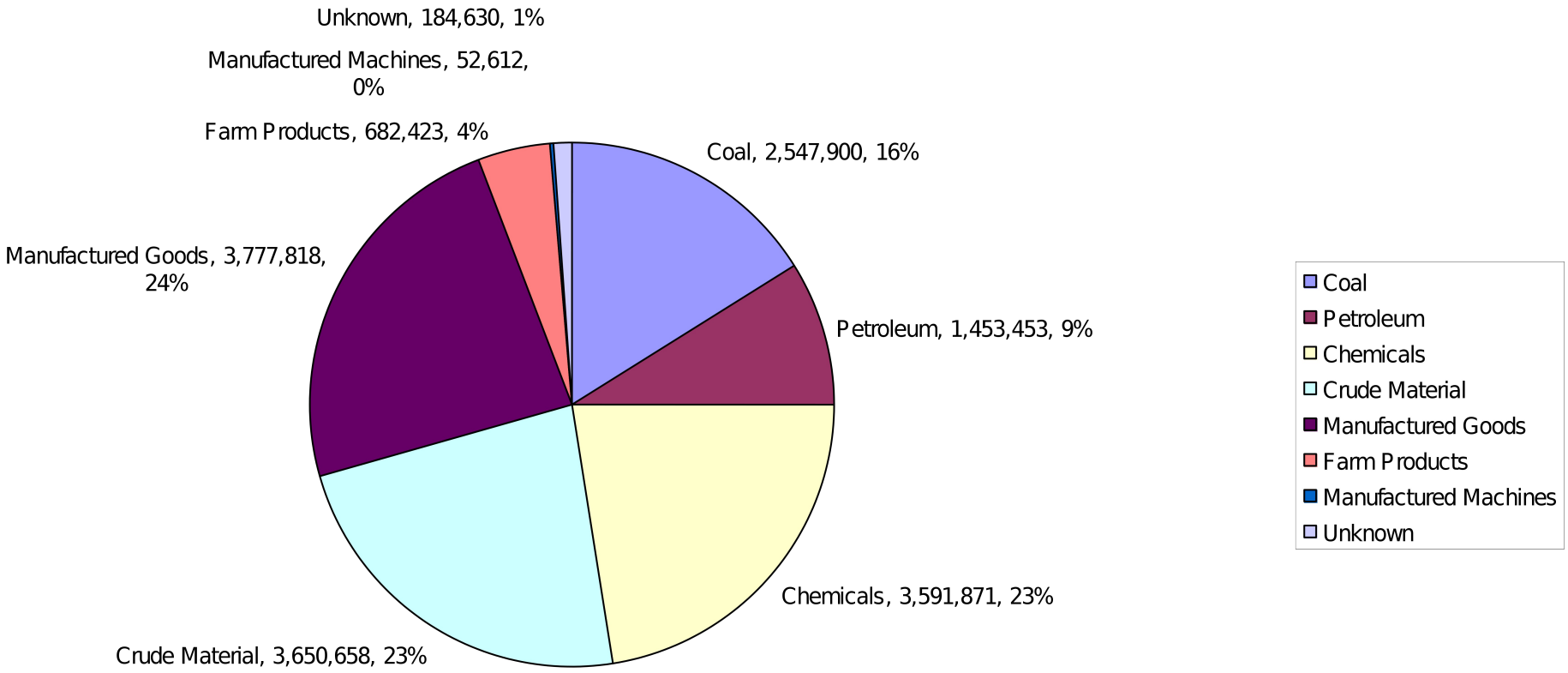
Lock 15 2005 Upbound Total Tonnages by Commodity
Total Tons: 9,984,993



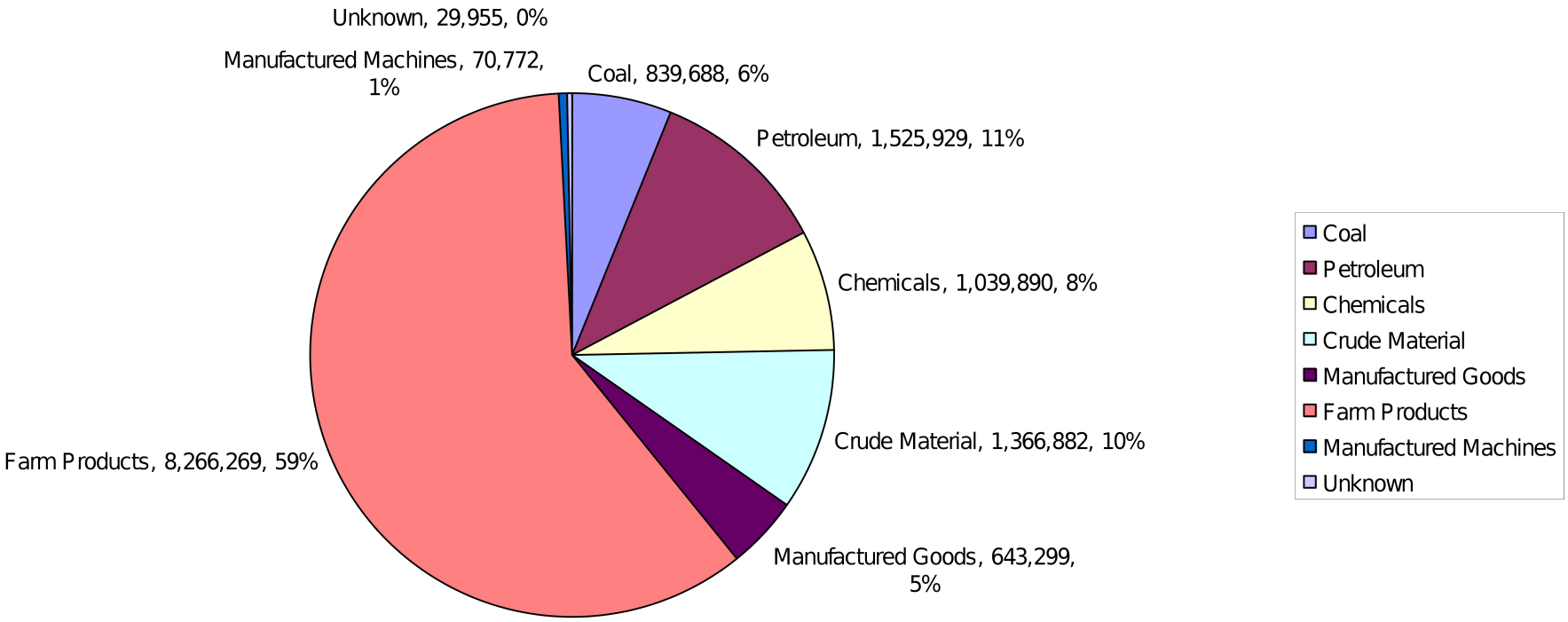
Lock 15 2005 Downbound Total Tonnages by Commodity
Total Tons: 11,006,014



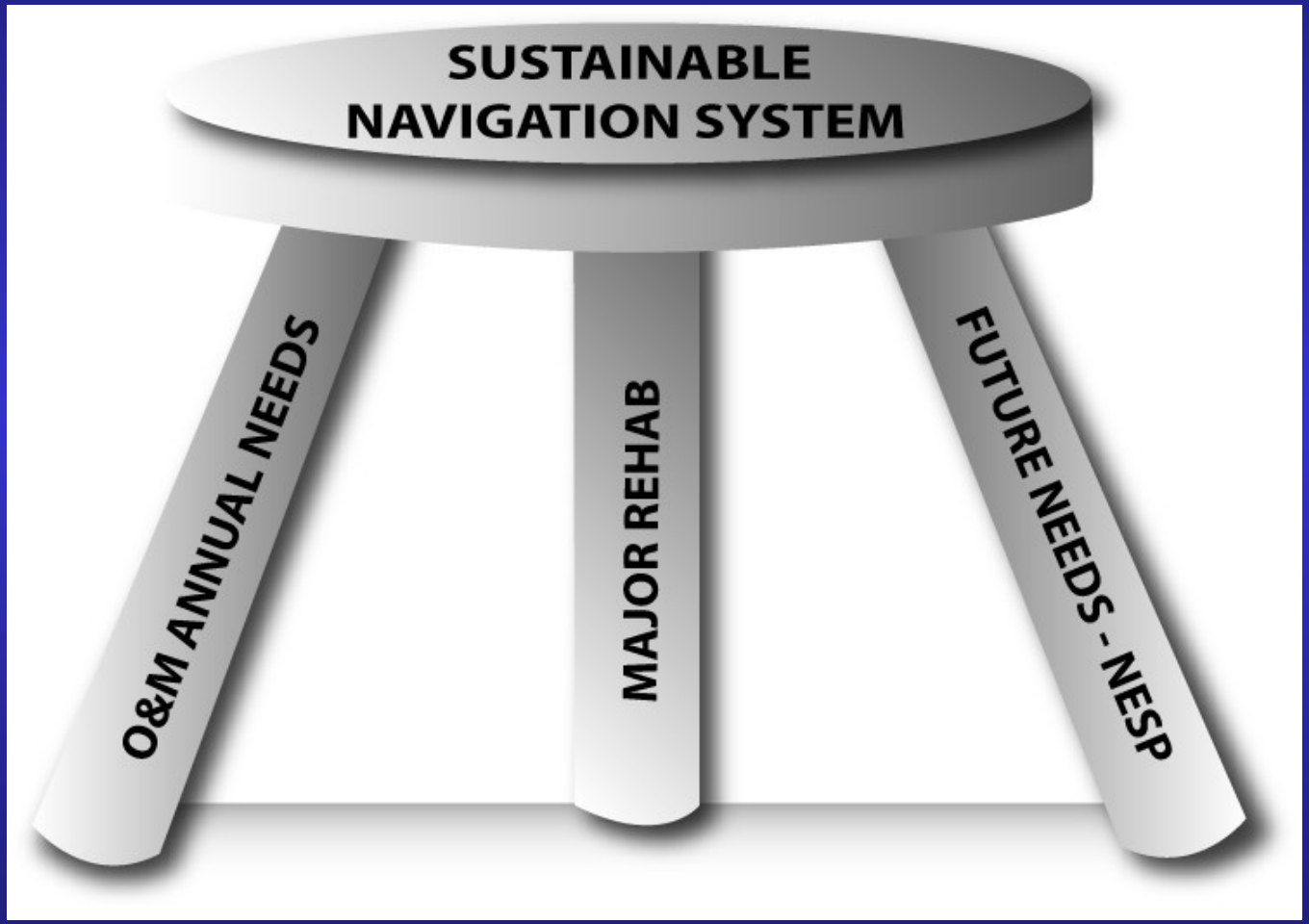
Peoria Lock 2005 Total Upbound Tonnages by Commodity
Total Tons: 15,941,365



Peoria Lock 2005 Total Downbound Tonnages by Commodity
Total Tons: 13,782,684



US Army Corps of Engineers®



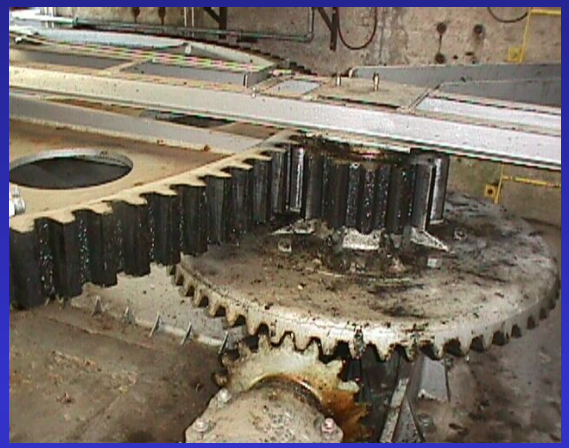
US Army Corps of Engineers®

- Locks Constructed in the 1930's
- Projected Life Span of 50 years

- Locks & Dam 15 Under Construction in 1930's
- (70 years ago)

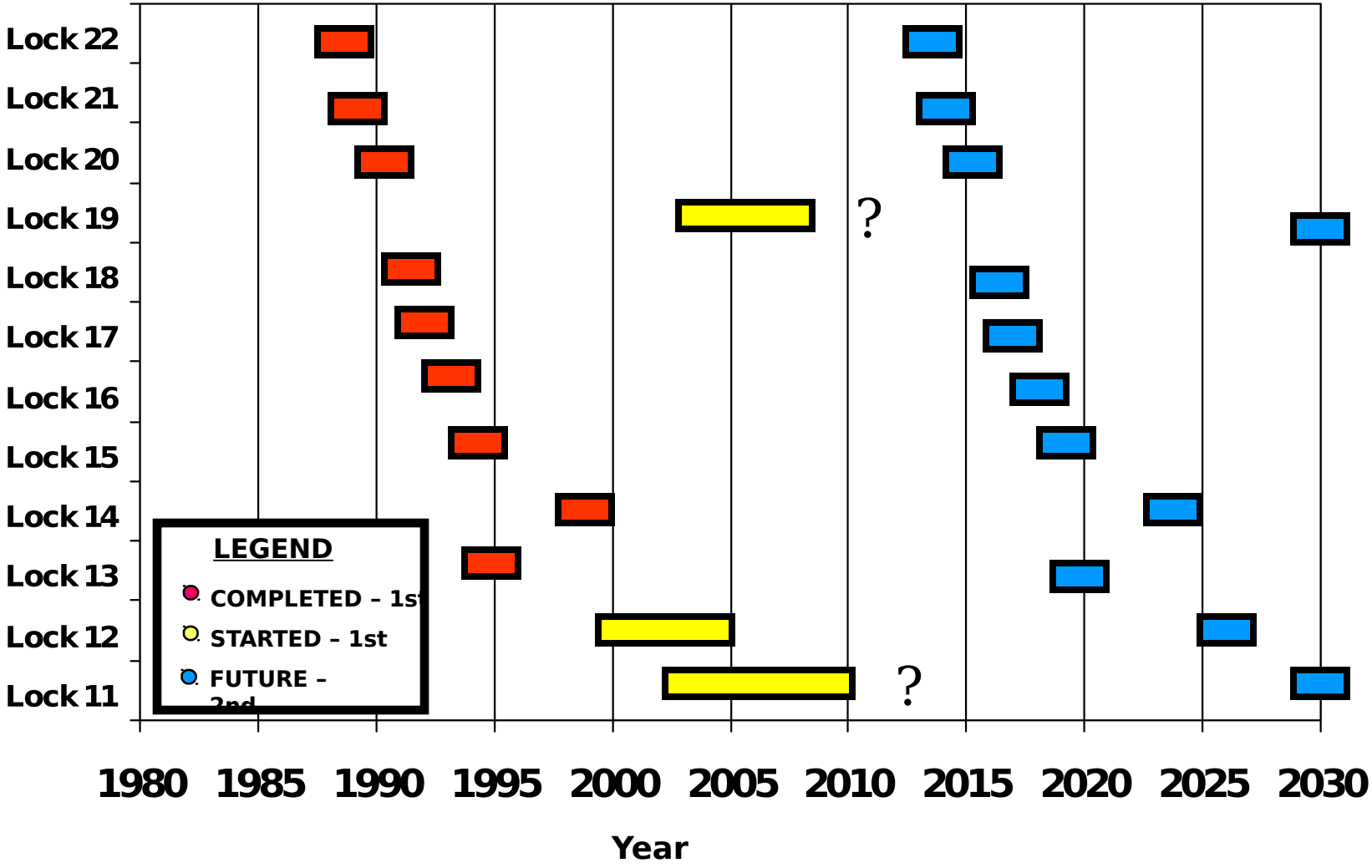
US Army Corps of Engineers®

Aging Facilities



- Aging Factors
  - Freeze / Thaw
  - Ice
  - Corrosion
  - Fatigue / Use
  - Barge Impacts/ Abrasion
  - Concrete Deterioration

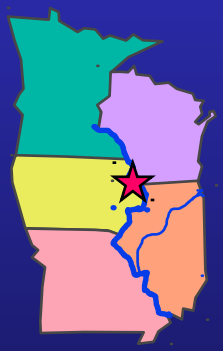
Schedule of Major Rehabilitations Upper Mississippi River in Rock Island District



US Army Corps of Engineers®

Lock & Dam 11
Dubuque, Iowa

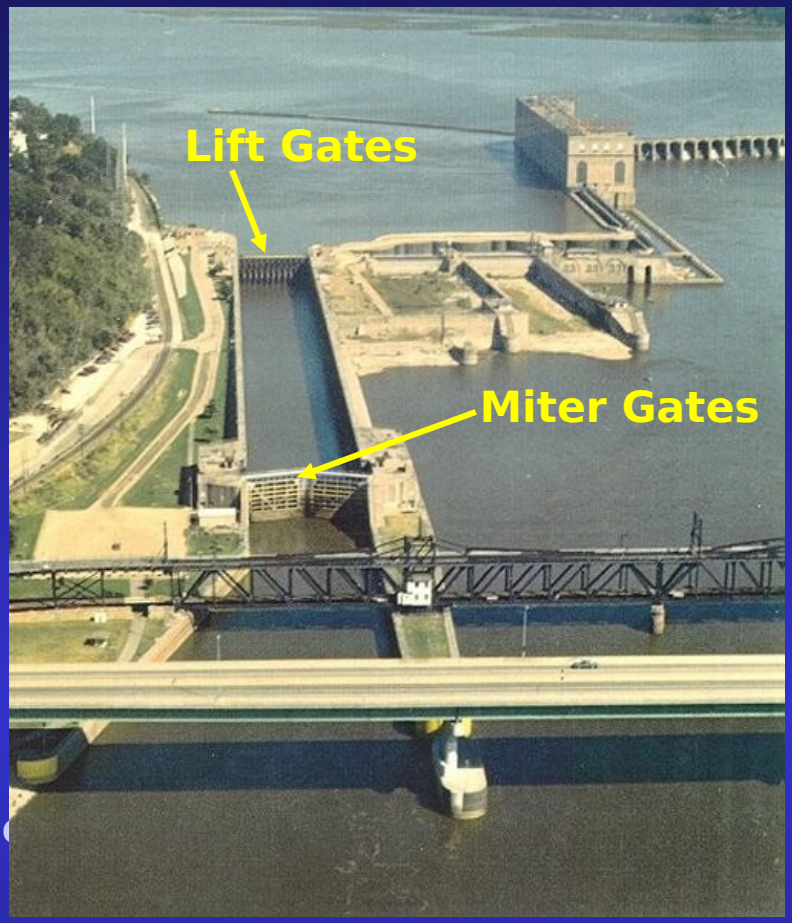
- FY02 New Start
- Stage I (Scour) Completed, $3
- Stage II (Lock) Underway, $26
- Stage III – $12 M Awaiting Fun

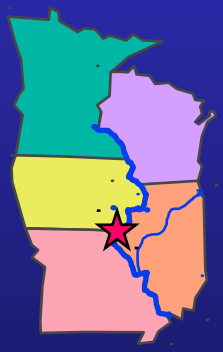


US Army Corps of Engineers®

Lock 19 Keokuk, Iowa

- FY03 New Start
- Major Rehab - $21 M CG/TF
  - $51M w/ Lock Concrete
- Major Maint. - $1 M O&M
- Staging of Work
  - Stage I – Lift Gate Repairs
  - Stage II – Miter Gates, Machinery & Electrical Replacem





US Army Corps of Engineers®

Lock 19 – Downstream Miter Gates

1998 -- Major cracking discovered & gates repaired

2003

- **Additional major cracking found with gates determined not repairable**
- **Catastrophic failure of the gates was imminent**
- **Spare gate sections obtained from St. Louis District installed**

US Army Corps of Engineers®

Lock Chamber Concrete

- Lock 19 (Unfunded)

$30 Million Rehab

Deteriorated concrete @ lower pool

Vertical corner protection armor damaged & missing

Note: For safety reasons, loose armor was torched off during 1998 dewatering. Protruding armor presents safety hazards during lockages.

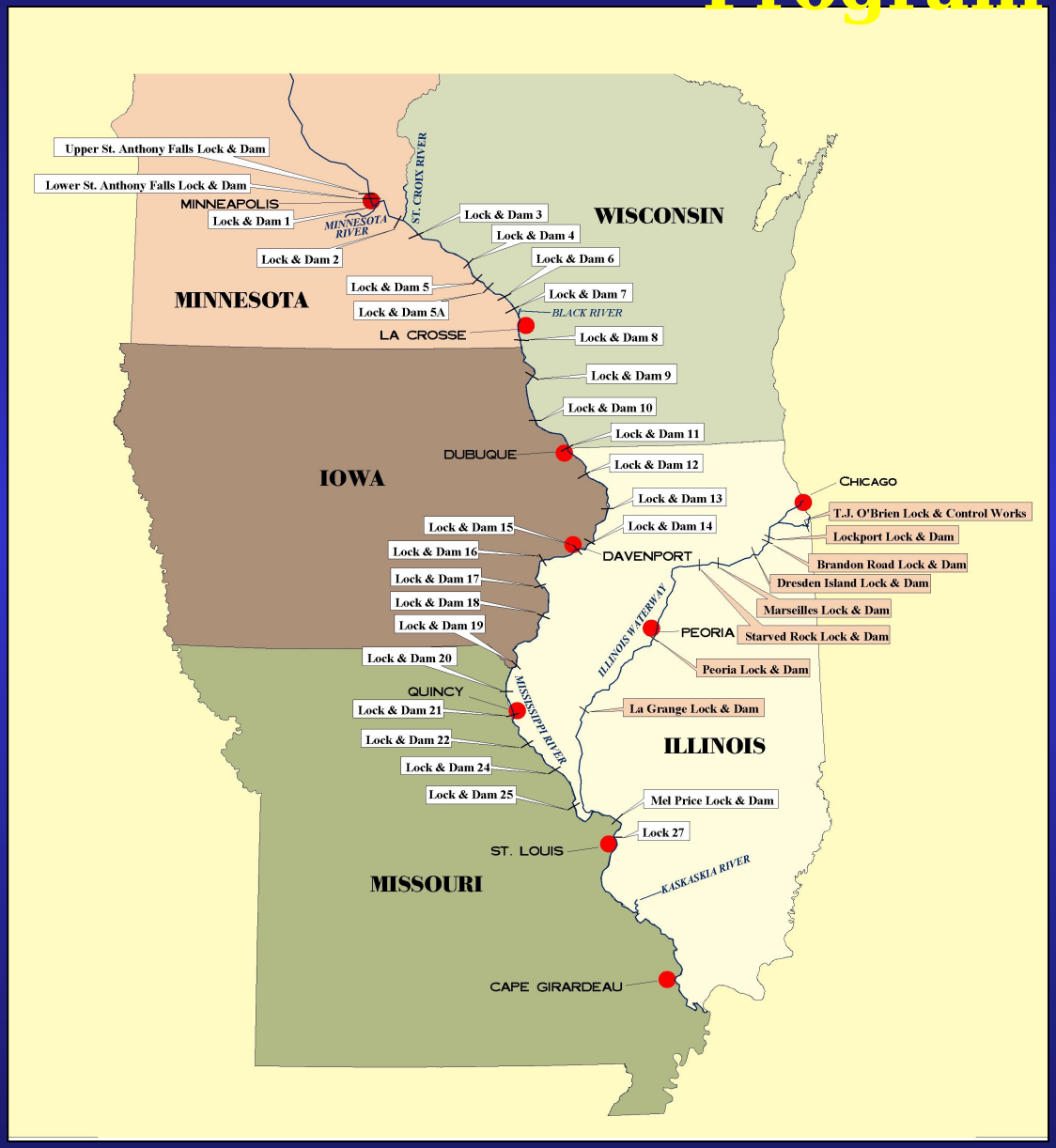
US Army Corps of Engineers®

Bulkheads & Slots Funding Needs

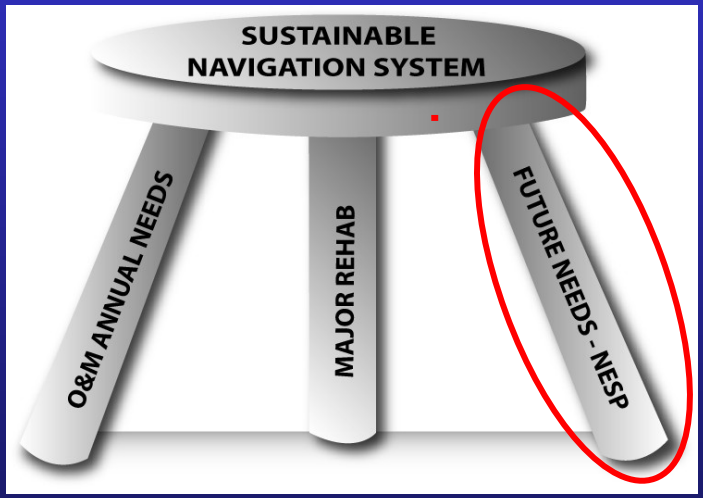
- **Bulkheads**
  - St. Paul (1 set) = $4,500,000
  - Rock Island (1 set) = $4,500,000 - IWW
    (Assumes 1 UMR Set Funded from Lock 11 Rehab)
  - St. Louis (1 set) = Existing
    Total = $9 Million

- **Bulkhead Slots**
  - St. Paul (10 sites) = $25,000,000
  - Rock Island (13 sites) = $23,000,000
  - St. Louis (1 site) = $2,000,000
    Total = $50 Million

Navigation & Ecosystem Sustainability Program



- 37 Lock Sites
- 1,200 Miles of River
- Significant Ecosystem (2.5



Collaboration

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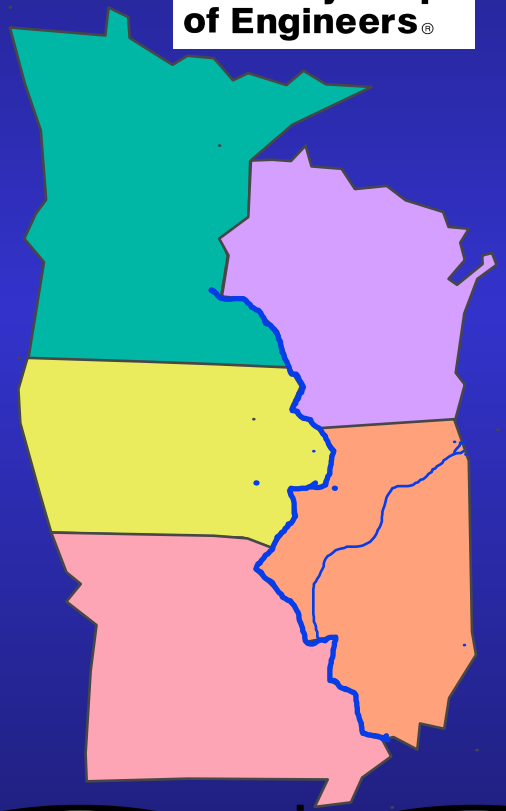
USGS science for a changing world

US Army Corps of Engineers®



PUBLIC

NGO's

US Army Corps of Engineers®

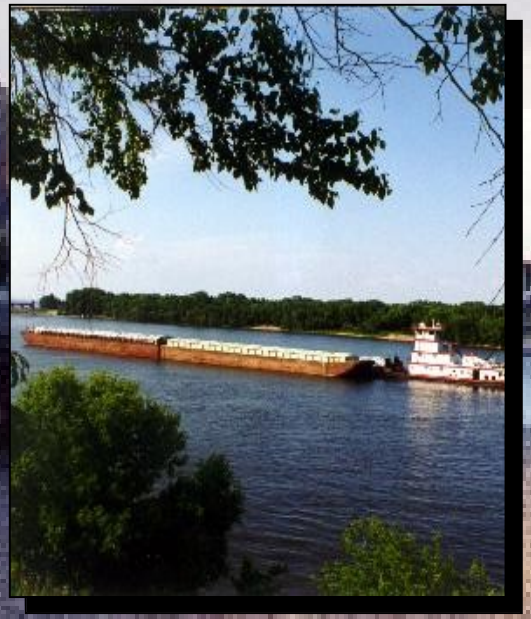
Upper Mississippi River System

Navigation & Ecosystem Sustainability Program

One Corps Serving the Armed Forces and the Nation

US Army Corps of Engineers®

Navigation & Ecosystem Sustainability Program (NESP)

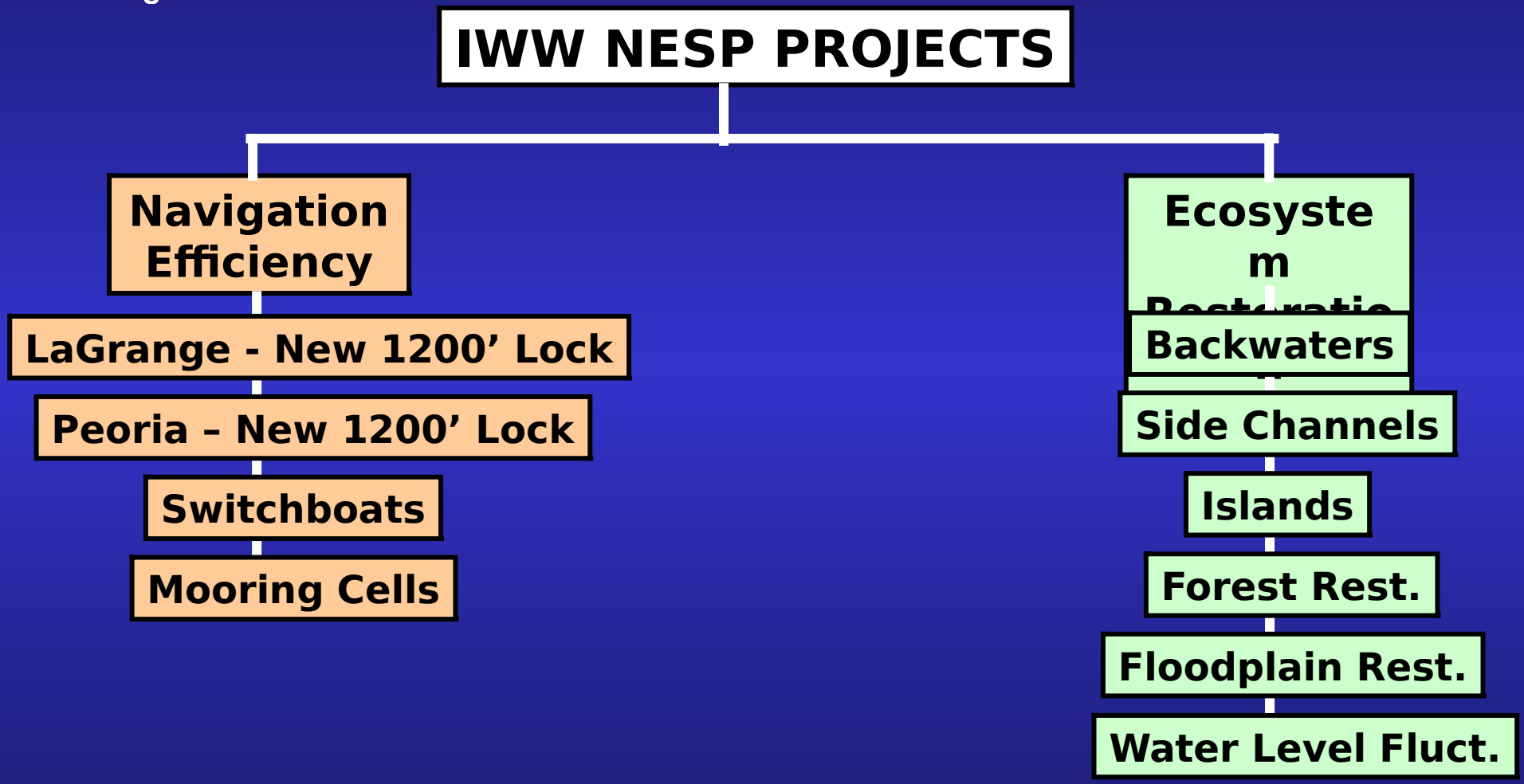


Navigation + **Environmental Restoration**

"To seek long-term sustainability of the economic uses and ecological integrity of the Upper Mississippi River System"

Navigation & Ecosystem Sustainability Program (NESP)

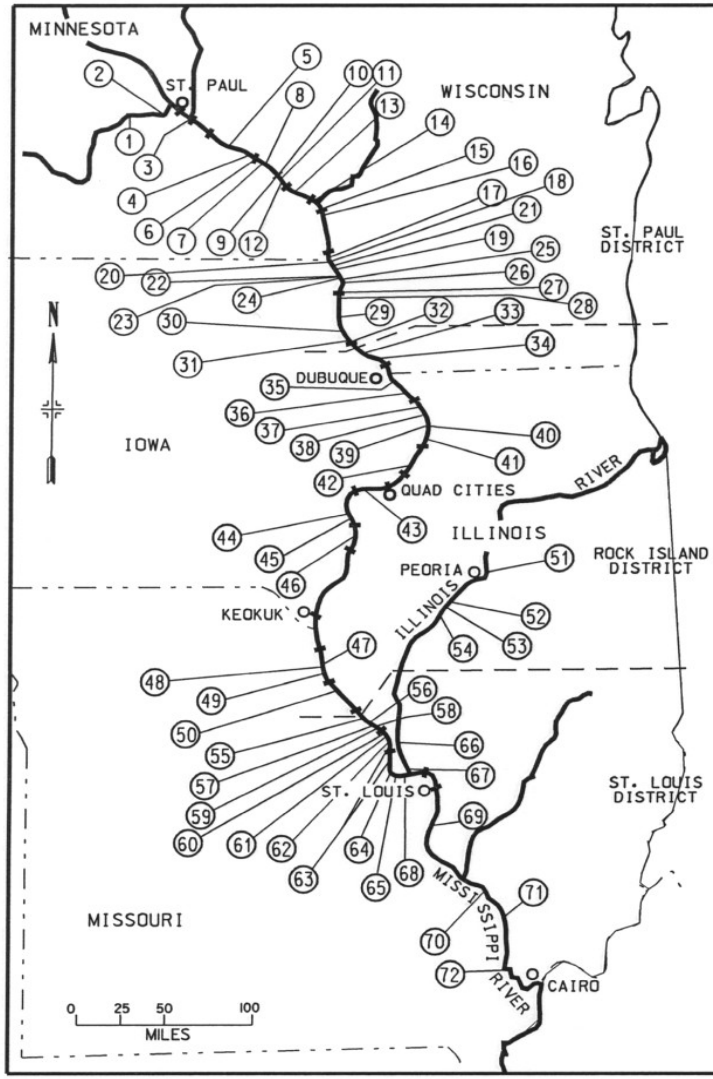
US Army Corps of Engineers®



Delay Consequences

- Increased shipping costs
- Negatively affects Producers, Consumers and all in between
- Environmental concerns
- Decreased International Competitiveness

Average delay and ton-hours of delay (2001)			
Upper Mississippi River (UMR)			
Lock	Average Delay of Tows (Hours)	Total Tonnage (Millions)	Ton Hours of Delay (Millions)
20	2.38	31.11	74.04
21	2.65	32.87	87.11
22	5.20	33.34	173.37
24	4.10	34.79	142.64
25	5.71	34.86	199.05



SITE NO.	PROJECT	DISTRICT AGENCY	STATUS (AS OF JAN 01)
NA	GENERAL PLAN	MVD	UNDERWAY
NA	LONG TERM RESOURCES MONITORING	USGS	UNDERWAY
NA	ECONOMIC IMPACTS OF RECREATION	MVD	COMPLETE
NA	TRAFFIC MONITORING	MVR	COMPLETE
NA	REPORT TO CONGRESS	MVR	COMPLETE

HABITAT REHABILITATION & ENHANCEMENT PROJECTS

SITE NO.	PROJECT	STATUS
1.	RICE LAKE. MN	COMPLETE
2.	LONG MEADOW LAKE. MN	UNDERWAY
3.	GOOSE LAKE. MN	DEFERRED
4.	PETERSON LAKE. MN	COMPLETE
5.	INDIAN SLOUGH BACKWATER. WI	COMPLETE
6.	FINGER LAKES. MN	COMPLETE
7.	ISLAND 42. MN	COMPLETE
8.	SMALL SCALE DRAWDOWN. WI	COMPLETE
9.	WHITEWATER RIVER. MN	DEFERRED
10.	SPRING LAKE PENINSULA. WI	COMPLETE
11.	SPRING LAKE ISLANDS. WI	UNDERWAY
12.	POLANDER LAKE. MN	COMPLETE
13.	TREMPEALEAU REFUGE. WI	COMPLETE
14.	LONG LAKE. WI	COMPLETE
15.	LAKE ONALASKA. WI	COMPLETE
16.	EAST CHANNEL. WI/MN	COMPLETE
17.	POOL 8 ISLANDS. PHASE 1. WI	COMPLETE
18.	POOL 8 ISLANDS. PHASE 11. WI	COMPLETE
19.	POOL 8 ISLANDS. PHASE 111. WI	UNDERWAY
20.	POOL SLOUGH. IA/MN	UNDERWAY
21.	BLACKHAWK PARK. WI	COMPLETE
22.	LANSING BIG LAKE. IA	COMPLETE
23.	CONWAY LAKE. IA	UNDERWAY
24.	CAPOLI SLOUGH. WI	UNDERWAY
25.	LAKE WINNESHIEK. WI	UNDERWAY
26.	POOL 9 ISLAND PROTECTION. WI	COMPLETE
27.	COLD SPRINGS. WI	COMPLETE
28.	HARPERS SLOUGH. IA/WI	UNDERWAY
29.	AMBROUGH SLOUGH. WI	UNDERWAY
30.	BUSSEY LAKE. IA	COMPLETE
31.	GUTTENBERG PONDS. IA	COMPLETE
32.	MISS RIVER BANK STABILIZATION	COMPLETE
33.	BERTOM-McCARTNEY LAKES. WI	COMPLETE
34.	POOL 11 ISLANDS. WI	UNDERWAY
35.	PEOSTA. IA	DEFERRED
36.	POOL 12 OVERWINTERING. IA/IL	UNDERWAY

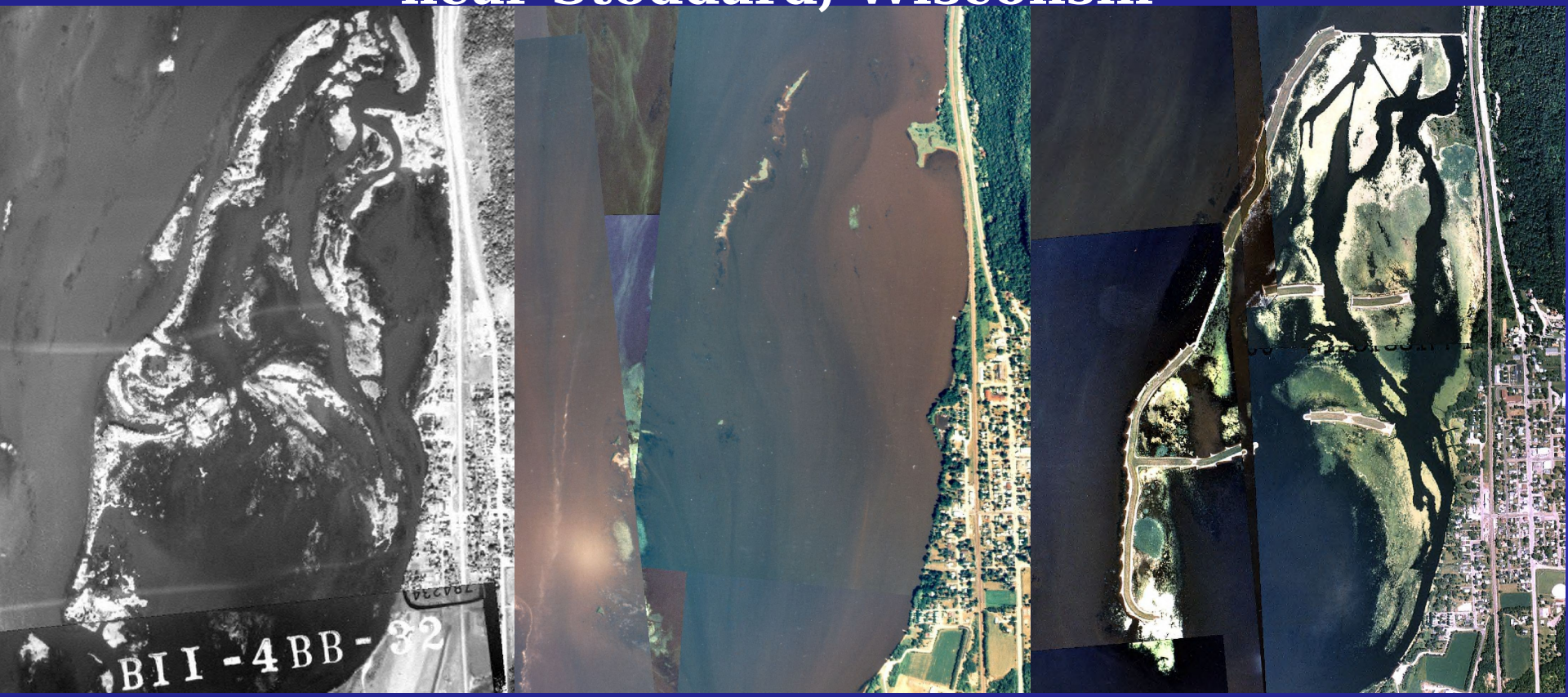
SITE NO.	PROJECT	STATUS
37.	PLEASANT CREEK. IA	UNDERWAY
38.	SMITH CREEK. IA	UNDERWAY
39.	BROWN'S LAKE. IA	COMPLETE
40.	SPRING LAKE. IL	COMPLETE
41.	POTTERS MARSH. IL	COMPLETE
42.	PRINCETON REFUGE. IA	COMPLETE
43.	ANDALUSIA REFUGE. IL	COMPLETE
44.	BIG TIMBER. IA	COMPLETE
45.	LAKE ODESSA. IA	UNDERWAY
46.	HURON ISLAND. IA	DEFERRED
47.	GARDNER DIVISION. IL	UNDERWAY
48.	COTTONWOOD ISLAND. MO	COMPLETE
49.	MONKEY CHUTE. MO	COMPLETE
50.	BAY ISLAND. MO	COMPLETE
51.	PEORIA LAKE. IL	COMPLETE
52.	BANNER MARSH. IL	UNDERWAY
53.	RICE LAKE. IL	UNDERWAY
54.	CHAUTAUQUA REFUGE. IL	COMPLETE
55.	CLARKSVILLE REFUGE. MO	COMPLETE
56.	ALTON POOL. IL	TERMINATED
57.	PHARRS ISLAND. MO	COMPLETE
58.	ANGLE BLACKBURN. MO	SCHEDULED AFTER FY 02
59.	NORTON WOODS. MO	DEFERRED
60.	STAG & KEETON ISLANDS. MO	COMPLETE
61.	SANDY CHUTE. IL	SCHEDULED AFTER FY 02
62.	BATCHTOWN MGMT. AREA. IL	UNDERWAY
63.	POOLS 25 & 26. MO	UNDERWAY
64.	CUIVRE ISLAND. MO	UNDERWAY
65.	DRESSER ISLAND. IL	COMPLETE
66.	STUMP LAKE. IL	COMPLETE
67.	SWAN LAKE. IL	UNDERWAY
68.	CALHOUN POINT. IL	UNDERWAY
69.	OSBORNE SIDE CHANNELS. IL	TERMINATED
70.	LEAST TERN. MO	DEFERRED
71.	DIKE ALTERATIONS. MO & IL	DEFERRED
72.	SCHEUIMANOR CHUTE. MO	UNDERWAY

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMANT PROGRAM
U.S. ARMY ENGINEER DISTRICT, ROCK ISLAND
MISSISSIPPI VALLEY DIVISION

Island Protection & Restoration

US Army Corps of Engineers®

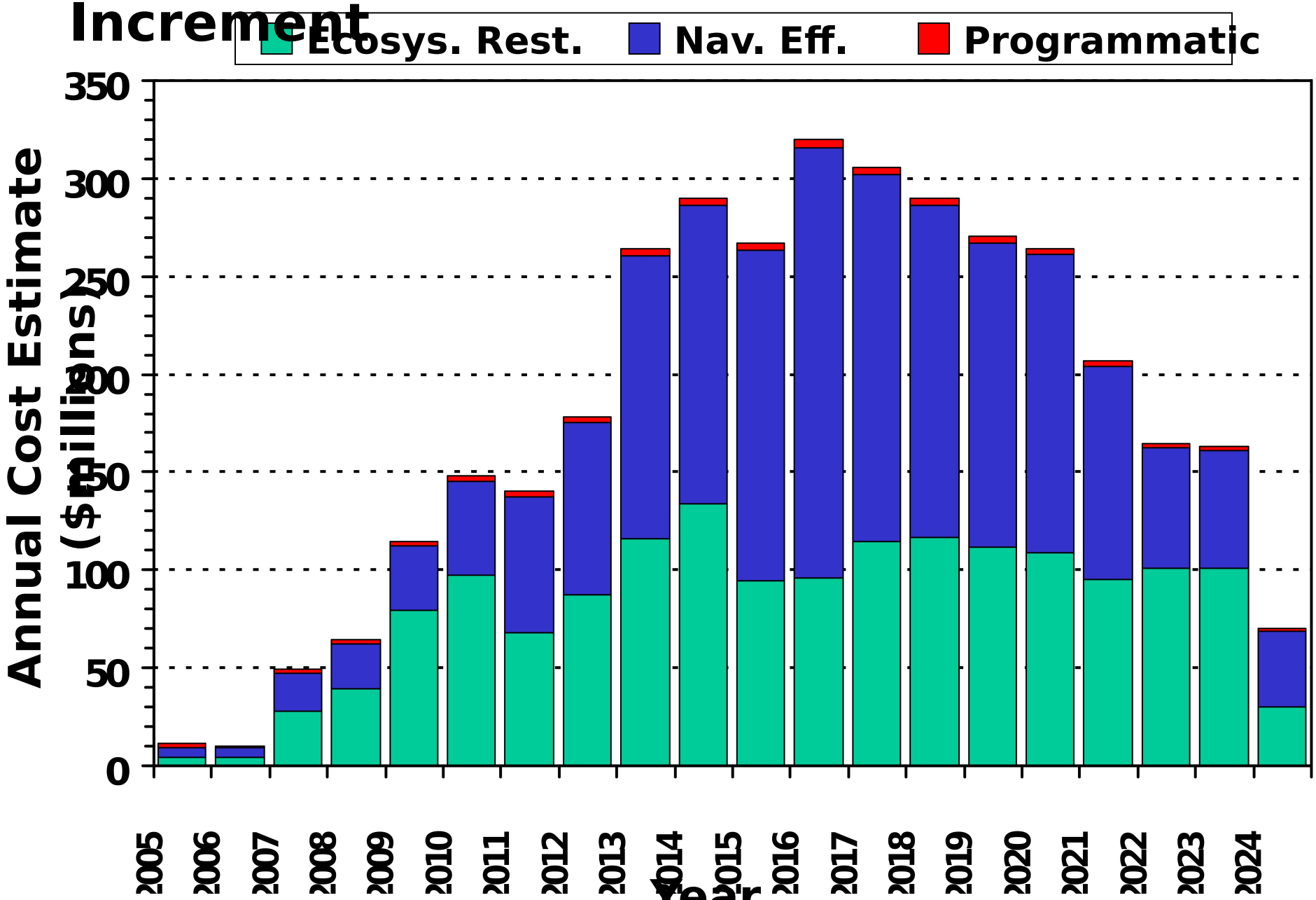
Pool 8 Islands HREP Phase II, near Stoddard, Wisconsin



October 1961 | August 1994 | August 2000

Restoration ($180 M Federal, $97 M Non-Federal)

Annual Cost Estimate for NESP 1st Increment



US Army Corps of Engineers®

First Increment Ecosystem Restoration

$1.58 Billion

- Fish passage @ Dams 4, 8, 22 & 26
- Changes in water control @ Dams 25 & 16
- Adaptive implementation of 225 small projects
  - Island building
  - Water level management
  - Backwater/side channel restoration
  - Wing dam/dike alterations
  - Island shoreline protection
- 35,000 acres of floodplain restoration
- Continued study & monitoring

US Army Corps of Engineers®

Ecosystem Restoration

Active Projects

- Backwater restoration – Upper Peoria Pool
- Side-channel restoration -- Scheniman Chute & Buffalo Island
- Wing dam/dike alteration -- Pool 2 & Herculaneum
- Changes in water control – Dam 25
- Shoreline protection – Multiple Sites
- Embankment lowering – L/D 8
- Island building – Pool 11
- Fish passage – L/D 22 & Mel Price
- Floodplain restoration -- Pierce County, WI; Root River, MN; Emiquon West, IL (USFWS)
- Water-level management – Pools 5, 9, & 18

US Army Corps of Engineers®

First Increment Navigation Projects

$2.03 Billion

- Mooring facilities @ Locks 12, 14, 18, 20, 22, 24 & LaGrange ($11M)
- Switchboats @ Locks 20 through 25 ($211M)
- 1200’ chambers at Locks 20 - 25, LaGrange & Peoria ($1.6B)
- Mitigation for incremental traffic effects ($180M)
- Continued study & evaluation ($22M)

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Navigation & Ecosystem Sustainability Program Status

- Final feasibility report - September 2004
- Chief of Engineer's report – December 2004
- Administration's position – January 2006
- Congressional action
  - House WRDA bill – passed
  - Senate WRDA bill – awaiting vote
- Pre-construction, engineering & design ($11.5 million FY 2005 & $10 million FY 2006)

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Navigation & Ecosystem Sustainability Program (NESP) Points of Contact

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UMRS NESP Website
http://www2.mvr.usace.army.mil/nesp/

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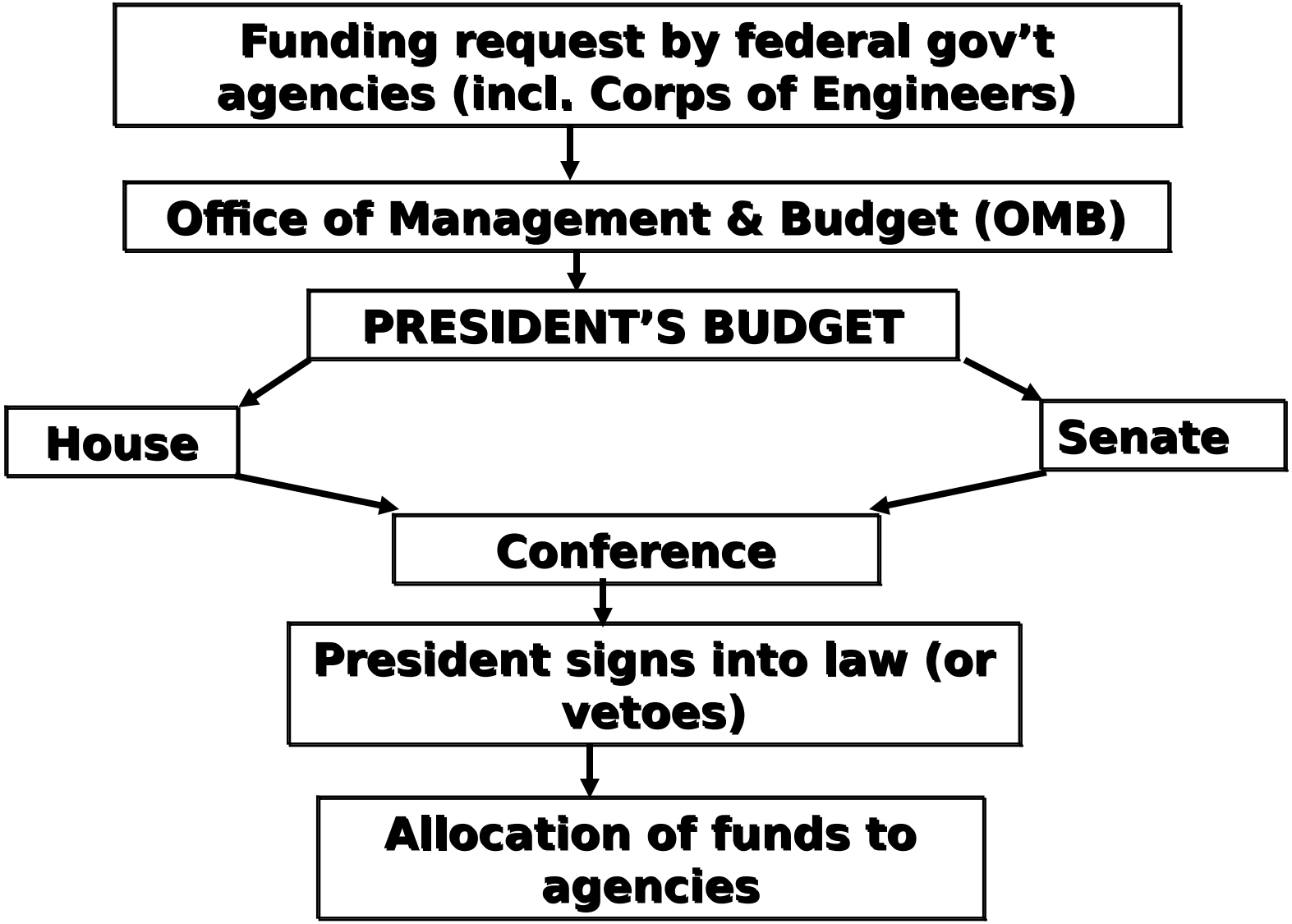
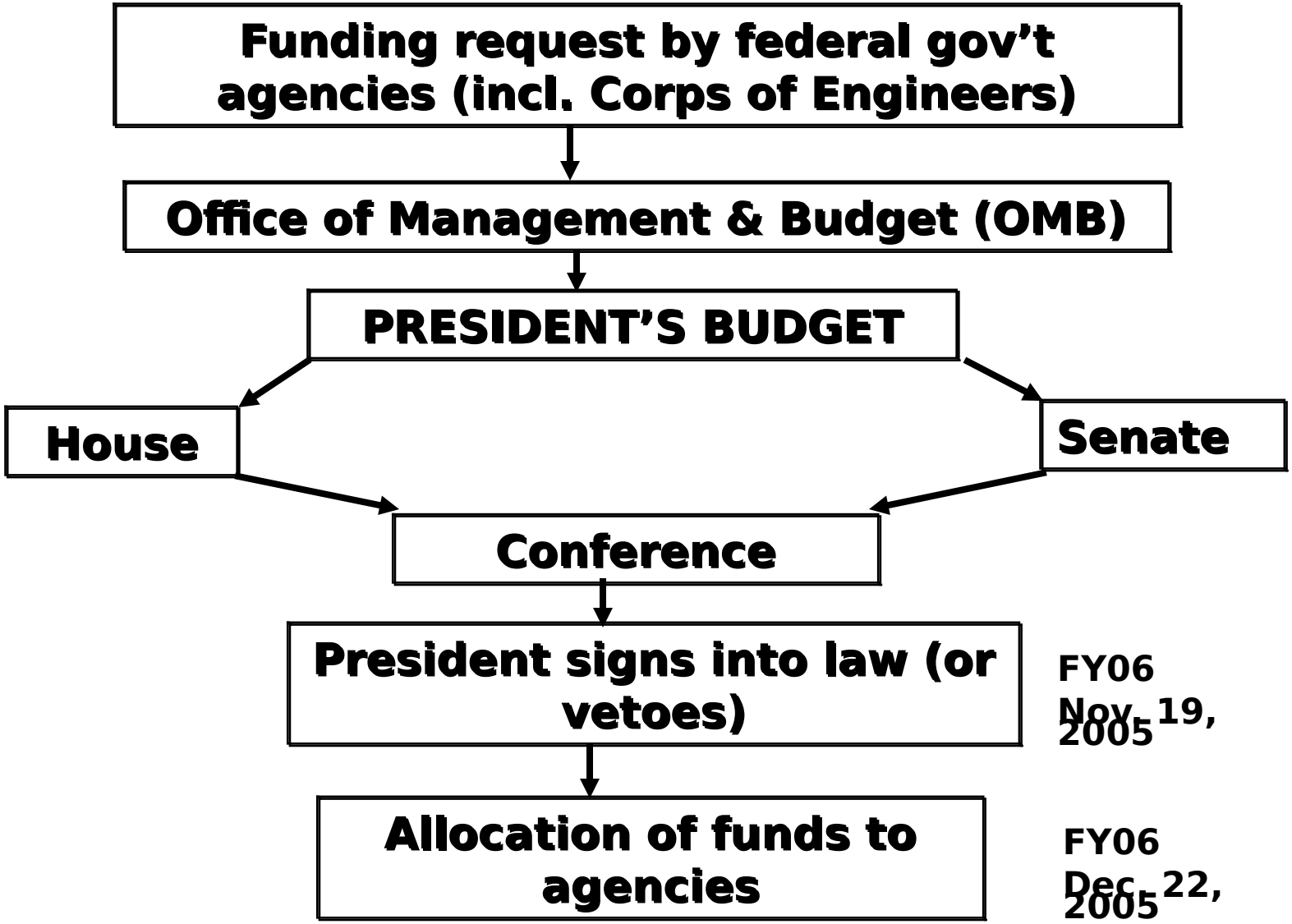
Appropriations Bills

Agriculture	Energy and Water Development	Legislative Branch
Commerce, Justice, State	Foreign Operations	Military Construction
Defense	Interior	Transportation
District of Columbia	Labor, HHS, Education	Treasury
		VA/HUD

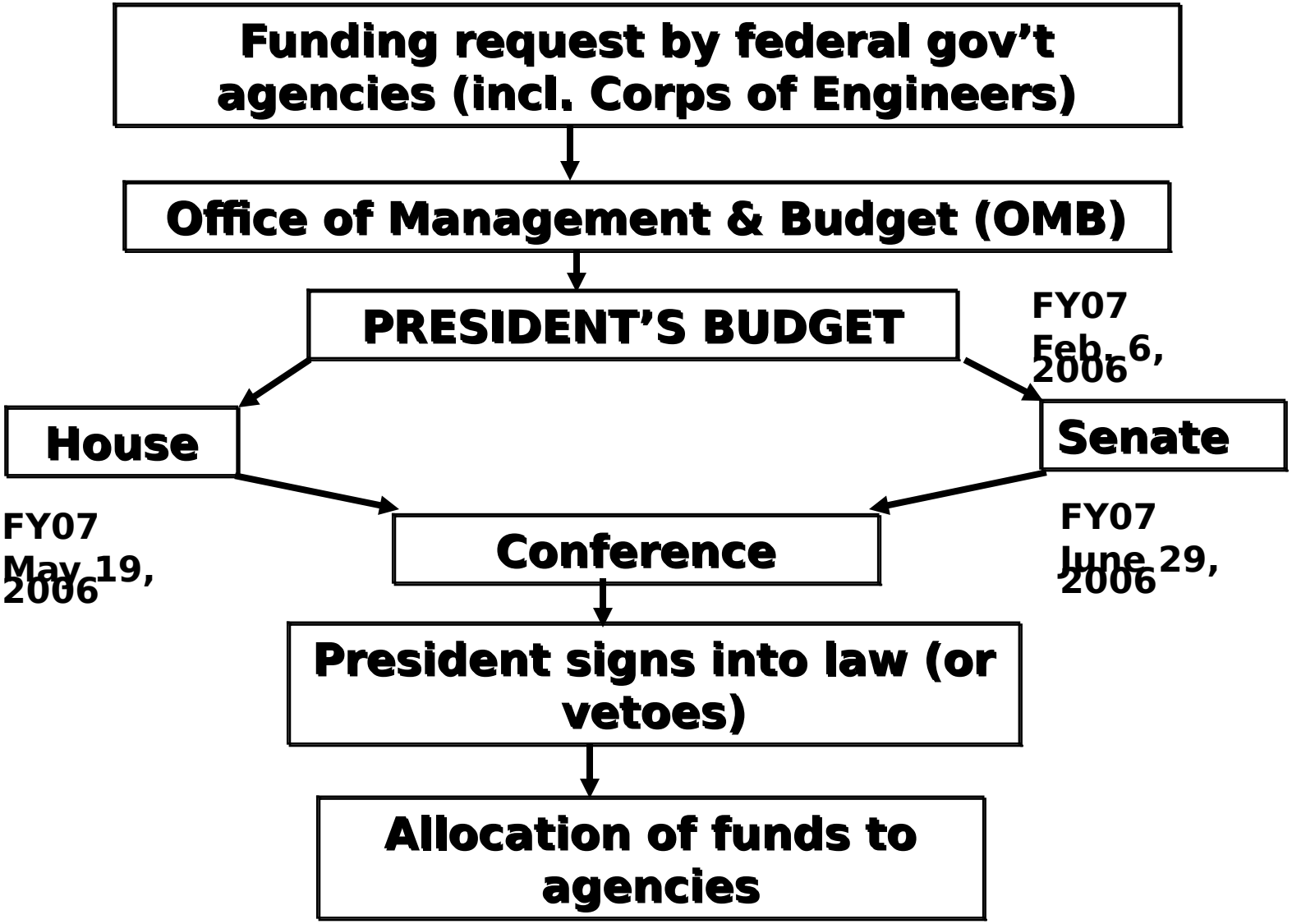
Budget & Appropriations Process


Funding request by federal gov't agencies (incl. Corps of Engineers)
Office of Management & Budget (OMB)
PRESIDENT'S BUDGET
House
Senate
Conference
President signs into law (or vetoes)
Allocation of funds to agencies

Budget & Appropriations Process


Funding request by federal gov't agencies (incl. Corps of Engineers)
Office of Management & Budget (OMB)
PRESIDENT'S BUDGET
House
Senate
Conference
President signs into law (or vetoes)
FY06 Nov. 19, 2005
Allocation of funds to agencies
FY06 Dec. 22, 2005

Budget & Appropriations Process


Funding request by federal gov't agencies (incl. Corps of Engineers)
Office of Management & Budget (OMB)
PRESIDENT'S BUDGET
FY07 Feb. 6, 2006
House
Senate
FY07 May 19, 2006
Conference
FY07 June 29, 2006
President signs into law (or vetoes)
Allocation of funds to agencies

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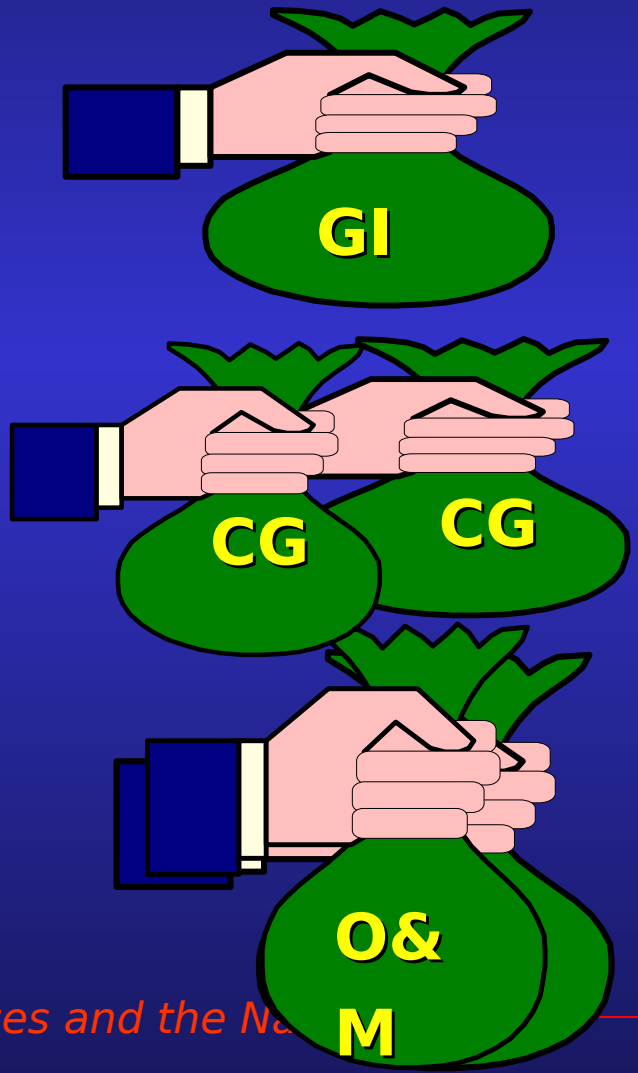
Major Budget Categories

GENERAL INVESTIGATIONS

CONSTRUCTION, GENERAL

OPERATIONS & MAINTENANCE



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FY2007 Budget (x$1,000)

	Pres Budget	Need
General Investigations	$ 400	$ 28,134
Construction, General*	$ 26,800	$ 81,020
Operations & Maintenance**	$102,634	$165,807

Notes:
*Includes total EMP (3 Districts)
**Includes Major Rehabilitation & Inland Waterways Trust Fund.

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General Investigations FY 2007 Budget (x$1,000)

	Pres Budget	Need
Clear Lake Watershed, IA (FEAS)	$ 0	$ 0
Cedar River (Time Check) (FEAS)	$ 0	$ 300
Des Moines & Raccoon Rvrs, IA (PED)	$ 0	$ 600
Fourmile Creek Watershed (FEAS)	$ 0	$ 100
IL River Basin Restoration	$ 400	$ 2,000
IL River Ecosystem Restoration (FEAS)	$ 0	$ 200
Keith Creek (RECON & FEAS)	$ 0	$ 300
Navigation Study (PED) (3 District Total)	$ 0	$ 24,000
Peoria Riverfront Dev. (PED)	$ 0	$ 250
Rock River Basin Ecosystem Rest. (FEAS)	$ 0	$ 0
UMR Comprehensive Plan	$ 0	$ 784

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Construction, General FY2007 Budget (x$1,000)

	Pres Budget	Need
Des Moines & Raccoon Rvrs, IA 100	$ 0	$
Des Moines Rec Rvr & Greenbelt $18,000	$ 0	
Davenport 4,800	$ 0	$
EMP (3 District Total) $35,210	$26,800	
IL River Basin 8,000		$
Nav. Improvements* $16,200		

*Requires construction authorization.

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Authorization

Congress gives permission to undertake a study or project.

Projects

House/Senate Committee Resolution - Studies

Water Resources Development Acts - Studies and

<u>Authorizations</u> Do Not Fund Studies/Projects.

You Receive Funding For Your Study/Project Through <u>Appropriations</u>.

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Status of the Water Resources Development Act

Normally every 2 years. Last WRDA in 2000.

House passed on July 14

Senate Env. & P.W. Comm. passed on July 1

(Awaiting floor time)

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Points of Contact

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Rock Island District Website: www.mvr.usace.army.mil

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